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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,479	03/09/2001	Alfonso M. Ganan-Calvo	FLOW-011	5879

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EXAMINER

HOFFMANN, JOHN M

ART UNIT

PAPER NUMBER

1731

DATE MAILED: 09/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/802,479	GANAN-CALVO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	John Hoffmann	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 22-26 and 28 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-21 is/are allowed.
- 6) ☒ Claim(s) 1-16 and 27 is/are rejected.
- 7) ☒ Claim(s) 22-26 is/are objected to.
- 8) ☐ Claim(s) 1-28 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
           Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
           If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
       a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
           1. ☐ Certified copies of the priority documents have been received.  
           2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
           3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
       \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
       a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other:  |

## DETAILED ACTION

### *Election/Restrictions*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-27, drawn to a method of making a fiber, classified in class 65, subclass 435.
- II. Claim 28, drawn to a fiber making apparatus, classified in class 65, subclass 533.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus can be used to practice a materially different process such as spray coating metal parts with paint.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

During a telephone conversation with Karl Bozicevic on 19 Aug 2003 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-27. Affirmation of this election must be made by applicant in replying to this

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Office action. Claim 28 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Claim Objections***

Claim 22-26 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 17 requires that the "narrowed stream" is expelled from the exit port as a fiber. Claim 22 requires the "stream of molten silica glass" flows "through" the nozzle (i.e. out the exit port). The exiting of the (non-narrowed) stream of molten glass is outside the scope of the claim 17 requirement that it is a narrowed stream which is a fiber (i.e. not molten). Therefore claim 22 does not limit claim 17 - it moves it to a completely different scope.

Claims 22-26 are not treated further on the merits.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-16 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 10: there is no antecedent basis for "the pressure chamber positioned downstream of the flow...." In fact, the disclosure seems to indicate that the flow is within the chamber. And if the claim was to indicate that the opening is downstream of the flow, this is not understood because the figures show that the flow continues past the outlet.

Claim 27: There is no antecedent basis for "the channel" of line 5 and one would not understand whether a channel is required. The preamble calls for making a preform element, but the claim indicates that it is a fiber which is created - it is unclear if the method must also result in a preform element.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Jeskey 4778501.

Scope of Claim 1: Most of the claim is straightforward. The "thereby forcing" the first end through the exit limitation is interpreted as requiring that the focusing fluid flow need only supply part of the force which forces and/or expels the glass/fiber/preform. Page 23, paragraph [0087] and page 12 [0054] of Applicant's specification indicate that there are forces other than the focusing fluid which act on the glass, namely, gravity and the motion of the preform. Furthermore, one could easily avoid infringement with vertical drawing - because gravity would aid in the downward movement of the glass fiber (i.e. gravity plus the fluid would force the first end). Then there is also the question about winding of the fiber on the spool which could impart tension which would help in drawing the end from the preform. It is deemed that the broadest reasonable interpretation of the claim is that the focusing fluid need only play a part in the claimed expelling and forcing. Further it would be improper for the Examiner to interpret the claim more narrowly explicitly provide for.

Looking to figure 2 of Jeskey: Section 55 is a "first end of a preform". It is in a pressure chamber: one can apply a pressure to the chamber. The treatment is the being heated by the "high-velocity" (col. 3, line 50) hot air from section 52. The gas has to flow downward along the preform so that it can be recirculated by feature 58. The downward movement of the gas would inherently aid in the forcing and expelling of the fiber - for the same reason it does in Applicant's invention. Whereas Applicant has disclosure for embodiments where the fluid motion has a much more pronounced effect

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on the drawing of the fiber, the claims are deemed to read on methods where the gas flow has only a small effect on the expelling and forcing.

Claims 2-4, 9 are clearly met.

Claims 1, and 5-7 and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Der Giessen 4673427.

See above how the present claims are interpreted. See the sole figure. The gas from 3 is the focusing fluid. As to claims 5-7, see col 2, lines 21-24. Claims 9-10 see col. 2, line 45-46.

Claims 1, 12-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagayama 5637130.

As indicated above, the flow of the gas such as in figure 1, will assist in the forcing and the expelling for the same reasons it occurs in Applicant's invention. The fact that Applicant discloses an embodiment where there the fluid might have a much stronger effect, is largely irrelevant because the claims are not limited to such an embodiment (with a possible exception of claim 11).

Claim 12 - any of the features 24 in the Nagayama drawings are deemed to be nozzles. From figure 7, it is clear that the inner surface is curved.

Claim 13: in cylindrical coordinates the geometry of the nozzle is  $P(x) = r$  where  $r$  is the inner radius of the tube and the equation  $P(x) = p_0 e^{-\lambda x}$

is met for the function  $x = -\ln(R/p_0)/\lambda$

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Alternatively, (if Examiner made the wrong calculation) the function  $X$  is defined to be the function which will make  $P(x)$  be indicative of the nozzle parameter geometry.

No matter what the nozzle shape is, one can choose a function which will make  $P(x)$  describe the curve. One may not be able to mathematically express the function, one can merely define the function " $x$ " to be the function which will make  $P(x)$  be the nozzle parameter geometry.

As to the value for lamnda. The function is valid for all positive numbers, including all numbers greater than 0.635.

Claims 14, 15 are met because lamnda can be almost any number.

### ***Allowable Subject Matter***

Claims 8 and 11 and 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 17-21 are allowed.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References C through M on the pto-892 are cited as being relevant to applicant's disclosure.

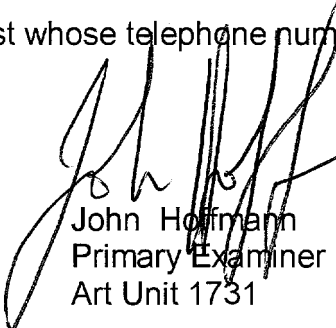


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is 703-308-0469. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 703-308-1164. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

  
John Hoffmann  
Primary Examiner  
Art Unit 1731

8-21-03

jmh